Chapter 12 Homework:

1. The circuit shown is described in the frequency domain. Determine the average power absorbed or generated by each circuit element.



1. Find the average power generated by the source in the circuit below, if *u(t) = 10cos(2t)*.



1. For the circuit of problem 2, find the power absorbed by the resistor.
2. For the circuit below, find:
3. The voltage *v(t)*
4. The average power delivered by the source*.*
5. The complex power delivered by the source
6. The inductor power



1. A load consumes 150kW with a power factor pf = 0.7 (lagging). If the load current is 240A (RMS), find the load voltage.
2. An industrial plant has an inductive load which consumes 10kW of power from a 220VRMS line. If the power factor is 0.8, what is the difference in angle between the load voltage and the load current?
3. For the circuit below,
4. Find the complex power delivered by the source.
5. Sketch a power triangle for the power delivered by source.
6. Find the average power delivered by the source.
7. Find the total power absorbed by both resistors.
8. Find the power absorbed by the 3Ω resistor.



1. For the circuit shown, find:
2. v(t), t→∞
3. The complex power delivered by the source.
4. The average power delivered by the source.
5. The reactive power delivered by the source.



1. For the circuit shown,  and 
2. The complex power delivered by the source.
3. The power dissipated by the resistor.
4. The equivalent impedance seen by the source.



1. For the circuit shown, find:
2. The equivalent impedance seen by the source.
3. The complex power delivered by the source.



1. For the circuit shown,
2. Find the complex power delivered by the source.
3. Sketch a power triangle for the power delivered by the source.

